

REMARKS

Claims 1-62 are pending in the present application. Claims 1, 13, 25 and 43 have been amended in response to the Office Action. Claim 9 has been cancelled. Reconsideration of the pending Claims is respectfully requested in view of the amendments to the Claims and the following remarks.

Claim Rejections

In the Office Action, the Examiner has rejected claims 13-18 and 43-50 under 35 U.S.C. § 101 as follows:

Claims 13-18 and 43-50 are rejected under 35 U.S.C. 101 because a program is merely a set of instructions. Absent a computer to execute the program, the claims are not functional descriptive material. (See MPEP, §2106.02).

The Examiner has also rejected claims 1-4, 8, 13-15, 18-21, 25, 26, 31-33, 35-39, 43-46, 49-55 and 59-62 under 35 U.S.C. § 102(e) as being anticipated by Anderson, U.S. Patent No. 6,622,087 B2. In this rejection, the Examiner states:

Regarding claims 1, 2, 8, 13, 19, 25, 33, 43, 51, and 62, Anderson teaches a navigation system and method for a vehicle comprising creating a digital map database (stored in memory file 240) containing a road network map that is divided into a plurality of road segments (see figs. 1a and 1B; col. 3, lines 59-67; col. 4, lines 63-65); a route planning module (200/205) to calculate (calculated by item 200) a route to a trip destination using the road network map (col. 3, lines 28-40; col. 9, lines 21-23); a traffic event notification device (225/235) operable to receive a traffic event notification message indicating a traffic event has occurred along a respective road segment of the route and a diversion module to retrieve an alternative route that avoids the traffic event by locating at least one marked diversion contained in the digital map database that is associated with the respective road segment where the traffic event has occurred (col. 5, lines 26-58 at least).

Regarding claims 3, 4, 9, 14, 15, 18, 20, 21, 26, 30-32, 35-39, 44-46, 49, 50, 52-55, 60, and 61, Anderson further teaches guiding the vehicle along the route and the alternate route where the respective road segments are located

between intersections – the alternate route being based on shortest travel time factor (col. 4, lines 1-34; col. 5, lines 26-47; col. 5, line 59 – col. 6, line [sic] col. 8. lines 4-47 at least).

In the Office Action claims 5-7, 10-12, 16, 17, 22-24, 27-29, 34, 40-42, 47, 48 and 56-59 have been rejected under 35 U.S.C. § 103(a) as unpatentable over Anderson as follows:

As discussed above, Anderson teaches all of the limitations except for the explicit recitation of calculating the diversion using small functional road class to avoid a traffic event beginning at a first predetermined distance before the traffic event and end at a second predetermined distance after the traffic event. However, it would have been obvious to one of ordinary skill in the art at the time of the invention Anderson teaches an equivalent system achieving guiding a vehicle to a destination and that using small functional road class to avoid a traffic event beginning at a first predetermined distance before the traffic event and end at a second predetermined distance after the traffic event is obvious in the navigation art by avoiding traffic events in a safe, short and efficient manner.

In view of the amendments to claims 1, 13 and 43 and for the reasons that follow, Applicants' respectfully traverse these rejections.

CLAIMS 13-18 AND 43-50, AS AMENDED, RECITE PATENTABLE INVENTIONS

As set forth in MPEP 2106.02(a), 'If a claim defines a useful machine or manufacture by identifying the physical structure or manufacture in terms of its hardware or hardware and software combination, it defines a statutory product. See e.g. Lowry, 32 F.3d at 1583, 32 USPQ2d at 1034-35; Warmerdam, 33 F.3d at 1361-62, 31 USPQ2d at 1760.'

As amended claims 13-18 and 43-50 recite a vehicle navigation system, including a computer, that produces a useful, concrete and tangible result; "an alternate route to a destination" in claims 13-18, and " a marked diversion to avoid a traffic delay" in claims 43-50.

Pursuant to MPEP 2106.02(a), claims 13-18 and 43-50 are statutory product claims and Applicants' respectfully request that the Examiner withdraw their rejections under 35 U.S.C. 101 and enter their allowance.

APPLICANT'S CLAIMS ARE NOT ANTICIPATED 35 U.S.C. § 102(e) BY ANDERSON

Except for its reference to "at least one marked diversion", which, as defined by Applicants, is not present in Anderson, the description of Anderson's teachings, set forth above from the Examiner's rejection, is substantially correct, but rather than indicating that Applicants' claims are anticipated by Anderson, the rejection indicates that Anderson does NOT anticipate Applicants' claims. Applicants' claims include the following recited elements that are NOT, as indicated by the Examiner's rejection disclosed, taught or suggested by Anderson;

a traffic simulation module to simulate at least one traffic event in at least one road segment – claims 1 and 3-7;

simulating a traffic event along at least one road segment of the road network map – claims 8-12;

computer readable code to simulate a traffic event in at least one of the road segments contained in the road network map – claims 13-18;

means for simulating a traffic event in at least one road segment contained in the road network map – claims 19-24

a simulator module configured to simulate a traffic event in at least one of each of a plurality of road segments along the route – claims 25-32;

simulating a traffic event on each road segment along the route – claims 33-42;

computer readable program code to simulate a plurality of traffic events in the road segments along the route – claims 43-50;

means for simulating at least one traffic event on at least one respective road segment along the route – claims 51-61; and

simulating a traffic event on each road segment along the route – claim 62.

Applicants' invention, unlike Anderson, permits a user to exercise his judgment in planning a trip by selecting those portions (but not necessarily all portions) of the route to his destination, which may impose travelling delays, such as heavy traffic, road construction, sports events and the like, and calculating and storing marked diversions for route portions that may impose delays by simulating traffic events in the one or more potentially, troublesome portions. "Marked diversions", as claimed by Applicants', are alternate routes developed to avoid Applicants' user-selected simulated traffic events, a concept that is not disclosed, taught or suggested by Anderson. Thus, Applicants' invention provide a navigation apparatus, system and method that can provide user-selected, predetermined and preprogrammed marked diversions that are immediately available in the vehicle to avoid potential traffic events and delays.

Contrary to Applicants' invention Anderson discloses and teaches that a data bank, called a "users travel profile" be collected over time, stored in a navigation system and recovered to provide route information to the system user. Anderson discloses, "The navigational system may provide a primary route to the user when a destination is specified. The primary route is calculated by the navigation system based on current travel conditions and based on the user travel profile" (Col. 3, lines 36-40)

The Examiner indicates in the rejection that Col. 5, lines 26-58 of Anderson teaches that in the event of notification of a traffic event along a road segment, a diversion module avoids the traffic event by locating at least one "marked diversion" contained in the digital map base. This is not correct. Applicants' predetermined preprogrammed and stored marked diversions for user-selected simulated traffic events are not disclosed, taught or suggested by Anderson. To the contrary, Anderson states, at Col. 5, lines 32-47,

When the dynamic routing agent 200 determines that the route needs to be changed because of a problem affecting the route, an alternate route is suggested to the user. A description of the problem and directions to the alternate route may be sent using the routing alerts and recommendation connection 255.

Alternatively, the dynamic routing agent 200 may recognize that the user is aware [sic] of the alternate route based on the user travel profile. In this case, the dynamic routing agent 200 may simply alert the user information about the event that requires the user to re-route to the alternate route. For example, the dynamic routing agent 200 may alert the user that a traffic jam exists on highway 26. In one embodiment, the routing requests 250 and the routing alerts and recommendation 255 are sent using wireless communication.

In every case, the dynamic routing agent 200 reviews and weighs the collected information on the users travel profile and travel conditions before selecting and recommending an alternate route. See Col. 4, lines 20-62; Col. 5, lines 26-58; Col. 5, line 59 – Col. 6, line 10; Col. 6, lines 19 – Col. 7, line 18; Col. 7, line 19 – Col. 8, line 46; Col. 8, line 61 – Col. 9, line 2; Col. 9, lines 11-14 and Col. 9, lines 21-50. Thus, the navigation system disclosed and taught by Anderson requires substantially greater data storage, substantial greater data processing capability and substantially longer alternative route development times at a substantially greater cost than Applicants' invention. Anderson discloses the following example;

Fig. 3 is an exemplary flow diagram illustrating one embodiment of a process of event handling. The dynamic routing agent 200 receives different feed information (e.g., traffic information, weather information and etc.) The feed information is also referred to as travel condition information. The feed information may be received in real time. Alternatively, some of the feed information may be based on forecast (i.e., non-real time) or based on delayed information. The dynamic routing agent 200 receives the primary route from the navigation system. The primary route comprises multiple route segments to be taken by the user to complete a trip. The dynamic routing agent 200 filters the feed information to match with each route segment. For example, when there is an accident on a route segment, this information will be relevant if it occurred on or impacts the same route segments that the user is about to travel on. The process in Fig. 3 starts at block 305 for a particular route segment. At any one time, there may be multiple traffic events relevant to the particular route segment that the user is approaching. In that situation, all of the traffic events have to be processed in order to provide more accurate route assistance to the user. For example, a first traffic event for a route segment may be a minor fender bender, which barely delays the traffic. However, a second traffic event for the same route segment may be an overturn of a diesel truck. The second traffic event may require road blockage and detour. Both of these events need to be considered for the route assistance to be of value to the user. Note that multiple events or conditions must be applied to the route as a whole, even if they impact different route segments.

At block 310, a determination is made to see if there is an unprocessed traffic event. When the result is "yes", the process moves to block 315 where the unprocessed traffic event is handled. The process continues at block 320 where a determination is made to see if there is unprocessed traffic flow information. For example, traffic on a route segment may be slower on a day after a holiday than any other days. If the result is "yes", the process moves to block 325 where the unprocessed traffic flow is handled. The user may be interested in being advised of the traffic flow information when the user is in a hurry. The dynamic routing agent 200 may use the traffic flow information to provide the user a better estimate of travel time.

The process continues at block 330 where a determination is made to see if the weather conditions have changed. When the result is "yes", the process moves to block 335 where the change in the weather condition is handled. For example, the change in the weather condition may cause the estimated travel time to be longer if the weather causes the traffic to slow down. The change in the weather condition may also cause the dynamic routing agent 200 to suggest an alternate route if the weather condition causes the route segment to be closed. The process continues at block 340 where a determination is made to see if the forecast has changed. If the result is "yes", the process moves to block 345 where the change in forecast event is handled. For example, the change in forecast may indicate that an expected storm warning over an area has now been removed due to a shift in wind direction. Based on this, the dynamic

routing agent 200 may suggest a shorter alternative route segment going through the area instead of a route segment going around the area. The process ends at block 350. It would be apparent to one skilled in the art that the events illustrated in Fig. 3 are for exemplary purposes only, and that there may be other events such as, for example, a sporting event, a mud slide, etc., that the dynamic routing agent 200 needs to handle to assist the user.

By contrast, Applicants' invention permits a user, using current information and his own judgment in planning a trip, to simulate one or more traffic delaying events on a particular road segment or particular segments along his route and store for immediate retrieval and use the marked delay avoiding diversions he wants. Anderson does not disclose, teach or suggest Applicants' claimed invention and does not anticipate, 35 U.S.C. § 102(e) Applicants' rejected claims.

Accordingly, Applicants' respectfully request the Examiner to withdraw the rejection of Applicants' claims and allow the application to issue.

CLAIMS 5-7, 10-12, 16, 17, 22-24, 27-29, 34, 40-42, 47-48, AND 56-59 are
PATENTABLE

In the obviousness rejection of Applicants' claims, the Examiner states, "...Anderson teaches an equivalent system achieving guiding a vehicle to a destination and that using small functional road class to avoid a traffic event beginning a first predetermined distance before the traffic event and end a second predetermined distance after the traffic event is obvious in the navigational art by avoiding traffic events in a safe short and efficient manner."

The rejection is incorrect and unsupportable in several respects.

First, as set forth above, Anderson does not teach a system equivalent to Applicants' claimed apparatus, method, program code and system. The claims of the

Applicants rejected as obvious are patentable and allowable at least as a result of their dependence from the allowable claims discussed above, which are not anticipated.

Further, the Examiner has not pointed out where in Anderson the subject matter of claims 5-7, 10-12, 16, 17, 22-24, 27-29, 34, 40-42, 47, 48 and 56-59 are disclosed, taught or suggested because, Applicants' respectfully submit, there is nothing in Anderson that discloses, teaches or suggests:

1) a marked diversion calculated to begin at a first predetermined distance before the traffic event and end a second predetermined distance after the traffic event – claims 5, 10, 17, 22, 27, 40, 48 and 56;

2) a marked diversion calculated to use a small functional road class to avoid the traffic event – claims 6, 11, 16, 23, 28, 41, 47 and 57;

a marked diversion calculated to use a small functional road class to avoid the traffic event where the small functional road class is located by searching a road class attribute found in the digital map base – claims 7, 12, 24, 29, 42 and 58;

ignoring functional road classes when calculating a marked diversion – claim 34; and

a marked diversion calculated to end at a predetermined distance beyond the traffic event along the route – claim 59.

"To establish *prima facie* obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. *In re Rogka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)" - MPEP 2143.03

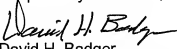
Accordingly, Applicants' respectfully request that the Examiner withdraw his rejection of claims 5-7, 10-12, 16, 17, 22-24, 27-29, 34, 40-42, 47, 48 and 56-59 and

allow these claims. If the Examiner chooses to continue with this rejection, Applicants' respectfully request the Examiner to identify where Anderson discloses, teaches or suggests their claimed subject matter and how the cited portion or portions of Anderson support the Examiner's rejection so Applicants' may understand and reply to the bases of the Examiner's rejections. See MPEP 2144.03.

Conclusion

With this amendment and response, the present pending claims of this application are allowable, and Applicant respectfully requests the Examiner to issue a Notice of Allowance for this application. Should the Examiner deem a telephone conference to be beneficial in expediting allowance/examination of this application, the Examiner is invited to call the undersigned attorney at the telephone number listed below.

Respectfully submitted,


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